REMARKS

Applicants reply to the Office Action dated April 14, 2009, within the shortened three month statutory period for reply. Claims 1-2 were pending in the application and the Examiner rejects claims 1-2. Reconsideration of this application is respectfully requested.

The Examiner rejects claim 1 under 35 USC 102(b) as being anticipated by Yoshida et al., U.S. Publication No. 2005/0083814 A1 ("Yoshida"). Applicants respectfully traverse this rejection.

Applicants assert that independent claim 1 is directed towards a drive apparatus that performs a sequential recording for a write-once medium. Specifically, with respect to the sequential recording, the pending claim language recites at least the step of:

"...controlling the recording/reproduction section to record the second data portion before recording the first data portion"

This feature is described in the present specification in at least paragraph [0809], which describes recording data E2 before recording data D2.

As noted on page 6 of the Office Action, the Examiner believes that paragraph [0080] of Yoshida provides the basis for the rejection of claim 1. More specifically, the Examiner defines that a "spare area" corresponds with a "first data portion" and a "user data area" corresponds with a "second data portion". Applicants respectfully disagree. Specifically, pending claim 1 defines the first and second data portions by reciting:

". . . storing the data to be recorded in the memory circuit;

defining data from a start location of the data stored in the memory circuit to a location corresponding to a next writable address as a first data portion;

defining data from the location corresponding to the next writable address to an end location of the data stored in the memory circuit as a second data portion . . ."

This is described in at least paragraphs [0803]-[0805] of the specification, which corresponds to a description of an exemplary illustration of the claimed invention as shown in figure 39.

Accordingly, Applicants assert that it is clear that the first and second data portion are defined based on the stored data to be recorded in the memory circuit. This is shown in the figure as data F, which is partitioned into first data portion D2 and second data portion E2. Moreover, Applicants assert that the language of claim 1 reflects this understanding by reciting that the first data portion be defined as "data from a start location of the data stored in the memory circuit to a location corresponding to a next writable address" (emphasis added). Similarly, the claim language also defines the second data portion as "data from the location corresponding to the next writable address to an end location of the data stored in the memory circuit" (emphasis added).

In contrast, Applicants assert that, even though paragraph [0077] of Yoshida can be recognized to disclose a buffer storing recording information, there is no indication in the subsequent Yoshida paragraphs that this information is partitioned in any manner to form the first and second data portions.

With respect to the point raised by the Examiner on page 6, second paragraph of the Office Action that a spare area is equivalent to the first data portion, Applicants respectfully disagree. As explained above, the first data portion is defined as data from a start location of the data stored in the memory circuit to a location corresponding to a next writable address. Whether a spare area contains a "next writable address" (as argued by the Examiner) is irrelevant, since the spare area is not data stored in the memory circuit. Rather, the spare area is recognized to be a portion of the recording medium onto which the data stored in the buffer is recorded onto.

Similarly, Applicants respectfully assert that the user data area does not correspond to a "second data portion", as asserted by the Examiner. Specifically, the "user data area" 102 is likewise an area on the recording medium and not data stored in the memory circuit, as recited by the second data portion of claim 1.

Applicants also respectfully assert that the Examiner's interpretation of the word "before" in the claim language is also incorrect. Specifically, Applicants assert that it is not accurate to interpret "before" to refer to a spatial recording of the data portions . As can be seen for example in figure 4 of Yoshida, the user data area 102 is recorded positionally before the spare area. In contrast,

Applicants assert that the pending claim language is not directed towards positionally recording the second data portion before the first data portion. Rather, claim 1 discloses sequentially recording (on a temporal basis) the second data portion before performing the recording of the first data portion. As such, Yoshida does not disclose or contemplate "<u>record</u> the second data portion <u>before recording</u> the first data portion" (emphasis added), as set forth in claim 1. In other words, claim 1 additionally requires that at least that the first data portion is recorded.

The disclosure of paragraph [0080] of Yoshida is contrary to claim 1 in that Yoshida does not teach recording the first data portion (the spare area). Rather, Yoshida teaches that "when the recording capacity of the user area becomes insufficient, the spare area updating unit 209 reduces the spare area 110 by allocating the spare area 110b to the user data area 102 . . . in response to the request command from the user or host computer" (see cited paragraph [0080] of Yoshida). Accordingly, Applicants assert that it is only possible to understand that the spare area is not recorded. Rather, the spare area is simply allocated to become the user data area as needed. Additionally, it is unclear from a technical perspective how a spare area (as suggested by the Examiner's arguments) can be recorded (a spare area can be allocated, but recording a spare area is not possible).

The requirement of the sequential ordering of the recordings of the two data portions is instrumental to the claimed invention. Specifically, by controlling the order of recording data in this manner, a range of the replacement recording can be minimized and an unnecessary replacement recording is not caused, which results in the reduction of the data size of the replacement management information (see paragraph [0809] of the specification).

The Examiner next rejects claim 2 under 35 USC 103(a) as being unpatentable over Yoshida in view of Park et al, US Publication No. 2004/0076049 ("Park"). Applicants respectfully traverse this rejection.

Pending claim 2 recites at least the technical feature of:

". . . determining whether or not a read-modify-write process is required;

when it is determined that . . . the read-modify-write process is required, determining a specific location in the user data area which is close to the

recording location of the replacement cluster as a recording location at which the data is to be recorded;

> controlling the recording/reproduction section to record the data at the determined recording location"

This feature is discussed in at least paragraphs [0875]-[0880] of the published specification, which describes a sequential order to performing the steps of the claimed invention. This order is also present in the pending claim language, which recites controlling of the recording/reproduction section to record the data at a determined recording location. Accordingly, the recording location must be first determined, and as recited by the claim language, this determination is performed <u>when it is determined that the read-modify-write process is required</u>.

The pending language of claim 2 recites determining whether the read-modify-write process is required. With respect to the outstanding Office Action, (see page 5, second bullet point, in particular), the Examiner holds paragraph [0043] of Park to be equivalent to this determining step. Applicants respectfully disagree with the Examiner's position.

Applicants assert that paragraph [0043] of Park cannot be understood to teach or suggest anything relevant to the presently claimed invention. Specifically, the paragraph of Park describes that "once the data recording (Recording 1) having a temporal continuity ends . . the microcomputer 26 writes management information onto an area 32 following the last DVU of Recording 1". Applicants assert that it is clear that this description is directed towards a step that is performed after recording of the data at a specified location. In contrast, as noted above, the presently claimed invention recites that the step of determining whether an RMW process is required occurs before the recording of the data.

Additionally, Applicants assert that paragraph [0043] of Park simply does not disclose or contemplate any determination step. While it is true that the writing of management information after recording of the data can be considered as "updated management information" as suggested by the Examiner, Applicants assert that this is not indicative of any determination performed by the drive control section. Rather, the only understanding that is afforded by the cited disclosure of Park, is that arbitrary management information is written onto an area 32 in order to manage defective areas and data written in the replacement areas corresponding to the defective areas

(see additionally, paragraph [0044] of Park). In this sense, Applicants assert that the manner in which this "updated management information" arises is not specified.

While it may be "possible" that this information can be determined, this is neither disclosed nor contemplated by the cited reference. "' Inherency may not be established by probabilities or possibilities. The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient. [citations omitted.] If, however, the disclosure is sufficient to show that the natural result from the operation as taught would result in the performance of the questioned function, it seems to be well settled that the disclosure should be regarded as sufficient.'" (quoting *In re Oelrich,* 666 F.2d 578, 581 (CCPA 1981)). In contrast, the pending claim language recites such a determination step.
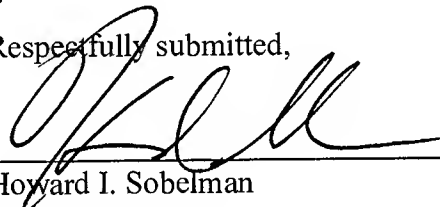
Furthermore, with respect to the Examiner's position raised on page 5, third bullet point of the Office Action, the Examiner asserts that figure 5 of Park shows a further determination step. Applicants assert that Park Figure 5 is directed towards physical areas on a recording medium, which therefore cannot disclose the claimed feature of "when it is determined that the ECC cluster including the location specified by the recording instruction is replaced by a replacement cluster and the read-modify-write process is required, determining a specific location in the user area . . ." (emphasis added). In other words, the pending claim language recites that a further determination step for the recording location is made in response to the determination that two conditions (the ECC cluster and the RMW process) are satisfied. Accordingly, as previously noted, the claim language should be recognized to require a specific order of determination steps before the recording of the information. This cannot be understood from a figure showing the arrangement of recorded areas.

Furthermore, Applicants assert that the entire disclosure of Park does not describe the specific sequential order of the method performed by the presently claimed invention. Specifically, attention should be drawn to the disclosure of paragraph [0066] of Park, which describes that "The data reproducing operation can occur currently, subsequently or prior to the data writing operation. The data writing operation can occur currently, subsequently or prior to the defect detecting operation and/or data replacement writing operation and/or the management information writing operation".

In view of the above, it should be clear that the method as defined by the invention of Park does not follow or require any specific ordering. As such, the Park system is in distinct contrast with the presently claimed invention in which a specific order is required before controlling the reproducing/recording section to record the data at a determined recording location which is close to the recording location of the replacement cluster. Advantageously, in requiring that specific conditions are determined to satisfy requirements before determining whether to record the data in a location close to the recording location of the replacement cluster, it is possible to appropriately reduce access time and realize performing the replacement recording at a higher speed (see paragraphs [0880]-[0881], P1).

In view of the above remarks, Applicants respectfully submit that all pending claims properly set forth that which Applicants regard as their invention and are allowable over the cited references. Accordingly, Applicants respectfully request allowance of the pending claims. The Examiner is invited to telephone the undersigned at the Examiner's convenience, if that would help further prosecution of the subject application. The Commissioner is authorized to charge any fees due to Deposit Account No. 19-2814.

Respectfully submitted,

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